OMNITALK USER'S GUIDE FOR THE MACINTOSH

CORVUS

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OmniTalk User's Guide

for the Macintosh

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About This Manual

This manual shows how to use Constellation(R) 3 network software by Corvus(tm). Constellation 3 allows a group of 512K Macintosh(tm) users to share resources, such as the OmniDrive(tm) network disk system, on the AppleTalk(tm) personal network. The network software manages communications between the network devices and allocates storage space on the OmniDrive.

You will learn how to log on and use the data storage capability of the OmniDrive. The computer views the OmniDrive as a collection of disks, several of which are available for your use at one time. Chapter 1 explains how to log onto the network and find out how to get started using it.

Chapter 2 explains volumes, the structure that Corvus uses to divide the storage area of the OmniDrive into manageable units. The chapter details the process of creating and mounting volumes. It also gives some tips for logging onto the network more efficiently by customizing your startup disk.

Once you begin using volumes on the OmniDrive to hold documents and applications, you may want to share data with other users and back up the data from volumes to diskettes. You may also need to maintain your volumes. Chapter 3 explains how to perform these tasks.

Before you begin to explore the network you should be familiar with actions and terms such as *drag*, *click*, and *desktop*. If you are uncertain about using the Macintosh, read *Macintosh*, the owner's guide, before continuing with this guide.

Chapter 1:

Tapping Into The Network

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Introduction

This chapter will get you started using the network and the data storage capability of the OmniDrive. Before beginning, you should check with whoever is performing the management tasks for your network to get your startup disk.

The term *network manager* in this guide refers more to duties than to a particular individual; therefore, your network may have several people responsible for the setup and maintenance of the network.

Getting Started

The network manager should give you a copy of your network startup disk and confirm your user name and password. Although the user name is written on the startup disk, the password (if you chose to have one) must be entered each time you log onto the network.

The name and password identify which volumes on the OmniDrive belong to you. Because the disk and password control access to your volumes, you should keep the disk in a safe place and the password confidential.

Each startup disk is unique (since the user name is written directly on it), and all network users should have their own disks.

- **Turn the Macintosh on and insert your network startup disk into the disk drive.**

If you don't have a password, the log-on process is automatic, and the desktop will appear shortly.

If you have a password, the Constellation 3 log-on message appears, with your user name already displayed and the insertion point in the Password box. All you have to do is enter your password to complete the log-on process.

- **Type your password and click OK or press Return.**

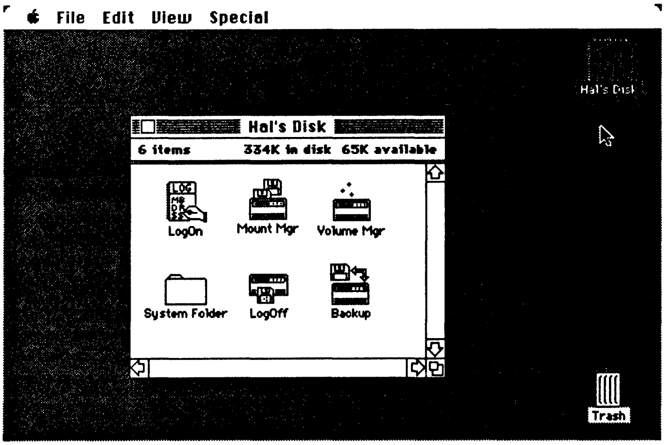
The password is not displayed on the screen, but each character appears as an asterisk instead.

If you make a mistake entering the password, a warning message appears. Click OK and the log-on box reappears. Enter the password again. If you still cannot log on, ask the network manager to check your name and password on the OmniDrive.

After your password is accepted, the desktop should appear with two icons: your startup disk and Trash. The startup disk will have a name assigned by the network manager, but you can rename it to whatever you want.

- **Open the startup disk window.**

Open it either by double-clicking on the icon or by selecting it and choosing Open from the File menu. Throughout this guide, double-clicking is suggested as a shortcut when selecting and choosing. If you are unfamiliar with double-clicking, refer to *Macintosh*, the owner's manual.

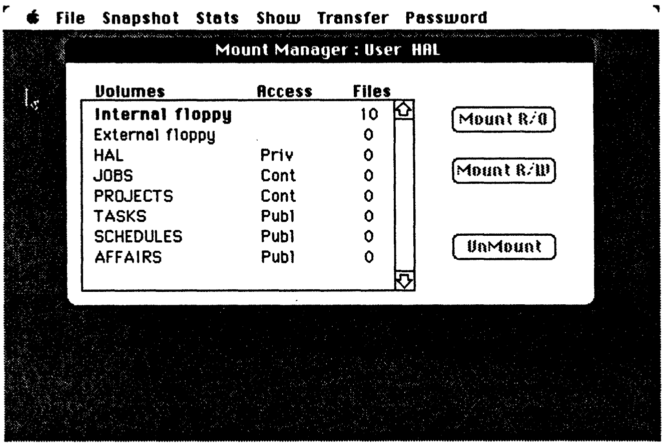


Your desktop should contain the icons pictured on the previous page. The Mount Mgr, Volume Mgr, LogOn, Backup, and LogOff icons are Corvus applications that will help you get the most from the network. The System Folder contains the system files supplied by Corvus.

Now that you have successfully logged onto the network, you are ready to begin discovering what resources are available to you.

- **Double-click on the Mount Manager icon.**

After a moment the Mount Manager window opens on the desktop.



Volumes	Access	Files
Internal floppy		10
External floppy		0
HAL	Priv	0
JOBS	Cont	0
PROJECTS	Cont	0
TASKS	Publ	0
SCHEDULES	Publ	0
AFFAIRS	Publ	0

The Volumes column lists the volumes on the OmniDrive that are available for your use. The internal and external floppy drives are also listed.

If no volumes appear in the Volumes column, you will probably have to create your own. However, you should read through the introductory sections of Chapter 2, "Learning About Volumes," before creating volumes. All of the items on the menu bar and their functions are explained in detail in Chapter 2.

What's Next?

Now that you know how to log on and open the Mount Manager, it's time to learn about volumes. Aside from the log on, you probably have not noticed much difference so far between using the Macintosh on a network and using it by itself. Chapter 2 will explain the chief reason for networking--sharing the data storage capability of the OmniDrive. Go to Chapter 2 when you're ready to continue.

LogOff, one of the Corvus applications, should be run every time you finish using the Macintosh. If you are going to turn off the Macintosh and begin Chapter 2 later, you should first run the LogOff program. You'll find LogOff on your startup disk. The LogOff utility updates volume directories, unmounts all volumes, ejects disks that are in the disk drives, and restarts the Macintosh. Use the program to ensure that all volumes are updated correctly.

To use the utility, just open LogOff from a disk or volume. The screen clears, and after a moment or two, any disks in the disk drives will be ejected. The volume directories are automatically updated. You'll know that the process is done when the Macintosh restarts and displays its prompt for a startup disk. You can now turn off the computer.

Be sure to use LogOff each time you're finished using your Macintosh on the network.

Chapter 2:

Learning About Volumes

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Introduction

This chapter explains volumes, the chief resource of the network. The chapter begins with a definition of a volume and an explanation of some important differences between volumes and disks. The distinctions among volumes themselves are also outlined.

The chapter also explains how to use the two applications Corvus supplies for handling volumes--the Mount Manager and the Volume Manager.

The Mount Manager lets you display and swap volumes on the OmniDrive, shifting them so that too many aren't mounted at once. You will use the Mount Manager to place volumes on the desktop and to switch which volumes are mounted at any given time.

If you want more volumes, or if none were created for you in the first place, you can create them with the Volume Manager.

The chapter closes with steps for changing your password and mounting volumes automatically each time you log onto the network. You might want to change your password if you suspect others know it. If you use the same volumes on a regular basis, mounting them automatically saves you time.

You should have logged onto the network and checked for volumes by opening the Mount Manager before beginning this chapter.

If no volumes were listed when you opened the Mount Manager, read through all the sections in order before creating volumes. The preliminary sections explain volumes and their attributes, and you will need this information to create volumes.

What's a Volume?

The OmniDrive is an information storage device that can hold the equivalent of tens to hundreds of regular Macintosh disks, depending upon the capacity of the model purchased. That huge storage area must be divided into manageable units, and Corvus uses the term *volume* to describe the divisions.

Volumes are similar to disks but can hold many times as much data, depending upon their size. A volume's capacity can range from one half of one diskette to forty diskettes.

Since most users need only a few different volume sizes, Corvus provides standard sizes to simplify adding volumes. Standard-sized volumes range in capacity from one to eight diskettes, but custom volumes can hold as much information as forty diskettes.

Corvus measures volume sizes in *blocks*, while Macintosh measures disks in kilobytes, or K. One block is equal to 512 bytes, or half a kilobyte (K). To compare disks and volumes, it is easiest to remember that two blocks equal one K. For example, an 800-block volume holds as much information as a 400K disk.

Volumes and disks are both represented by icons on the desktop. The volume icon is a representation of the OmniDrive. Corvus uses the term *mounted* to mean a volume's icon is visible on the desktop. When the volume's icon is visible, the computer can read data from and write data to that volume.

Only mounted volumes can be read from and written to, just as only disks in the disk drive can be read from and written to.

The next section explains some important differences to consider when using volumes instead of disks with your Macintosh.

Volumes vs. Disks

For the most part, you can think of volumes and disks as interchangeable. However, there are some differences. This section lists some important considerations for using volumes instead of disks.

The Finder$^{(tm)}$ expects to find disks rather than volumes used with the Macintosh. As a result, it assumes that icons on the desktop represent 400K disks, not volumes of varying sizes, and several options function differently with volumes than with disks.

- You cannot use Erase Disk with volumes, because it damages the volume structure when it removes the files.

  Corvus provides the Clear option in the Volume Manager to remove all the files from a volume.

- You cannot drag disk or volume icons to another icon to copy files. Copying files this way damages the volume structure.

  To copy all the files from one icon to another, open the source volume window and choose Select All from the Edit menu. Drag all the files as a group to the destination volume icon.

- You may lose track of Clipboard and Scrapbook data and volume icons if you switch System Folders.

  To keep track of Clipboard and Scrapbook files and ensure that volume icons don't disappear, keep the System Folder from your network startup disk in one volume. If your network has a public system volume that all users share, it should have the one System Folder you need.

  Note however, that some applications also need their own System Folder. One test is to run the program from its disk before and after copying it to the drive. Copy just the application, not its System Folder, and be sure to put it somewhere other than the system volume.

  If it doesn't function identically (screen displays look different, etc.), you'll have to make an exception and also copy over the System Folder. Remember though, Clipboard and Scrapbook data and volume icons might be lost temporarily when you run the application. Simply running a program from the system volume will restore both the data and icons.

> Note also that you might need the Imagewriter file in other volumes that hold applications. Some applications check their own volume for the file before they will print anything.

You will discover that the Finder will rebuild the desktop more quickly after you close an application if you don't have a disk in the disk drive. Once you have volumes, copy all your files to them and use disks only to log on or hold duplicate copies of files.

Unfortunately, some applications have a form of copy protection that insists the disk be inserted at all times. If you have such an application, store the documents you create with it in volumes, and run the application from its disk. Note that this may cause the System Folder problems explained previously.

Volume Types

Since the network will be used by a number of people (but there's only one OmniDrive) the Constellation 3 network software has a series of checkpoints built in so that users don't interfere with each other's work. There are three checkpoints, or attributes, for each volume: volume owner, volume password, and volume type.

All three attributes are entered or specified when a volume is created. When the network manager creates a volume for you, he must specify you as the owner. However, you are automatically the owner of volumes you create, because the user name on your startup disk with is taken as the owner name. Only the network manager can change a volume's owner.

A volume's owner is the only person (excluding the network manager) who can change the attributes of a volume. Also, only the owner can mount private volumes (private volumes are explained later in this section).

The volume password provides the second level of control for volume access. Whenever you try to mount a volume you don't own that has a password, you must enter the password. The password won't appear as you type, but asterisks will denote each character (just as they do when you log on and enter your password).

You never have to enter passwords for your own volumes when mounting them, but you must know a password to change it.

If you give a volume a password and subsequently forget it, you can check or change it, but you cannot check or change passwords on volumes that you don't own.

Volume type is more involved than either owner or password, but it is crucial to maintaining control over your volumes and who uses them.

There are four volume types: public, private, controlled, and uncontrolled. These four distinctions primarily determine if you can read and write information in volumes.

You can either open (and maybe print) the documents in a volume without changing them, or you can change, save, delete, rename and move documents. Just being able to open documents in a volume is called read-only access, abbreviated R/O.

Changing as well as opening documents is called read-write access, abbreviated R/W. Read-only access is comparable to locking a disk using the lock tab, while read-write access is comparable to normal operation.

The distinction between R/W and R/O is important in a network environment because several network users can be using the same volume at the same time. If two users write simultaneously, the volume could be damaged. Constellation 3 uses the designation *controlled* to allow R/W access to the same volume for more than one user. A thorough explanation of all four volume types begins below.

Private Volumes

The majority of the volumes you'll have on the OmniDrive will probably be private volumes. Private volumes are very similar to the disks you're currently using. For example, no one can use your disks or your private volumes without permission.

In fact, it's even harder for someone to use your private volumes, since you'd have to change the volume's attributes first.

You always have R/W access to your private volumes, but you can choose to have R/O access if you want to be certain nothing in the volume will be modified or deleted. The R/O access only applies until you unmount the volume or turn off your Macintosh.

Public Volumes

If your network manager created volumes, it's likely that some of them are public volumes, because they simplify many network tasks. Public volumes can be shared by all network users who know the password. If the volume doesn't have a password, all network users can mount it.

Documents, applications, and folders that all network users need should be placed in public volumes. For example, all network users could share the System Folder, Mount Manager, Volume Manager and Backup programs from the same public volume. Each user could use his personal set of volumes just for documents, thereby saving space in all the private volumes.

Only the volume owner can have R/W access to a public volume; all other users have just R/O access. Network users can open applications and documents, but only the volume owner can make changes to them. To find out who owns a volume, open the Mount Manager, select the volume and choose Volume info from the Stats menu.

On a public volume, only the users who know the volume's password are allowed to use the documents and applications in it. If only a few network users should share the information in the volume, only those few should know the password.

Controlled Volumes

One of the major advantages to networking becomes apparent when two users need to share the same document or information. Rather than swapping disks or shouting across the room, they can exchange the information over the network.

Controlled volumes provide the means for safely transferring data between users. The safety question arises because if two users write to the same document at the same time, data could be lost.

No problems arise when several people read the same document or application. Only one user at a time can write to a controlled volume, thereby preventing any data loss.

The volume password controls which network users can share controlled volumes. Of course, without a password, all can share it.

The first user who mounts the volume with R/W access can read and write to it; all others who mount it have R/O access.

After the user with R/W access unmounts the volume with the Mount Manager, another user can have R/W access.

Note that using the Finder to eject a volume or restarting or turning off the Macintosh will leave a volume locked. The subsection "Others' Volumes" in this chapter tells how to unlock a locked volume.

Uncontrolled Volumes

Uncontrolled volumes allow all users who have the volume mounted to read and write data. Since unlimited R/W access can result in data loss, you probably will not mount uncontrolled volumes unless your network has multiuser software. You should probably not create uncontrolled volumes unless you have a multiuser application to put in it.

Multiuser software refers to programs with built-in capabilities for controlling who writes to a file. This control can be provided by implementing semaphores, a feature of Constellation 3 that programmers can take advantage of when they design applications.

Mounting Volumes

Mounting volumes on the OmniDrive requires that you are recognized as a network user and that you have accessible volumes on the OmniDrive to mount. Since you've already logged on and checked for volumes, you're ready to mount the volumes you have available. If you don't have volumes yet, go to the section "Creating Volumes" to add volumes for yourself. Return to this section when you have volumes to mount.

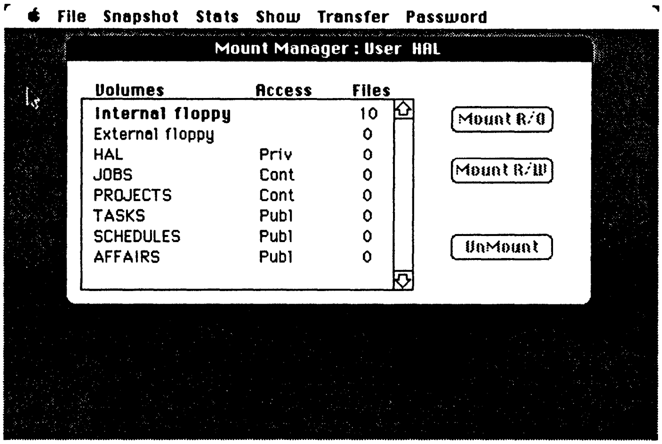
The Mount Manager takes its name from the term *mounted*, which was defined in the section "What's a Volume?" at the beginning of this chapter.

Mounting is necessary because all volumes cannot be available at the same time: you can have up to six volumes and two disks in use at any given time. Because you might have more than six volumes on the OmniDrive, Corvus provides the Mount Manager to swap volumes.

For the first few times, open the Mount Manager from your startup disk. However, you should run the Mount Manager (and your other applications) from a volume on the OmniDrive whenever possible. For now, though, open the Mount Manager from your startup disk.

- **Open the startup disk window.**

- **Double-click on the Mount Manager icon.**



Mount Manager : User HAL

Volumes	Access	Files
Internal floppy		10
External floppy		0
HAL	Priv	0
JOBS	Cont	0
PROJECTS	Cont	0
TASKS	Publ	0
SCHEDULES	Publ	0
AFFAIRS	Publ	0

Note that *Internal floppy* in the Volumes column is the only entry highlighted.

Volumes that are mounted are highlighted. You have some type of access to all the volumes listed, as noted in the Access column. The four types are abbreviated *Priv*, *Publ*, *Cont*, and *Ucnt*.

Other volumes probably exist on the OmniDrive, but, for convenience, the Mount Manager only lists those that you can use.

The number of applications and documents, including those in folders, is tallied in the Files column.

If the Volumes column contains more than nine entries, you'll need to use the scroll box in the scroll bar (or click on the scroll arrow) to view the rest of the entries.

Volumes You Own

The following steps show how to mount volumes you own. Remember that the name on the startup disk and the volume owner's name must match to be able to mount volumes you own. The desktop should have the Mount Manager already open.

- **Choose a volume you own from the list.**

Use the scroll box or arrow to move through the list until you find a volume with *Priv* as its entry in the Access column.

You can also own volumes of the other three types, but unless you created them, it is unlikely that any belong to you. If you aren't sure if you own a volume that isn't private, click to select the volume, then select Volume info from the Stats menu to check volume owner.

- **Click somewhere along the row for the volume.**

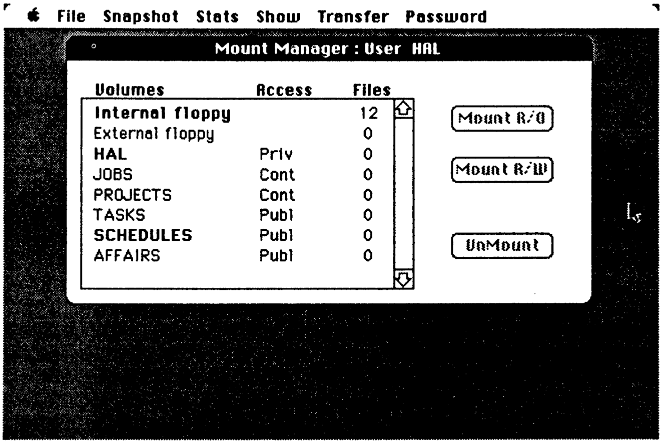
  The row should be highlighted, along with the Mount R/O and Mount R/W buttons.

- **Move the pointer to Mount R/W and click.**

  Remember that you can elect to lock the volume by mounting it with R/O access. In most cases though, you'll probably mount private volumes with R/W access.

  You can also mount a volume by double-clicking on its row in the list. Double-clicking always mounts private volumes with R/W access. The owner never has to enter a volume password.

  The volume name should be highlighted after you click on the button or double-click on the row, indicating that the volume will be on the desktop when you quit the program.

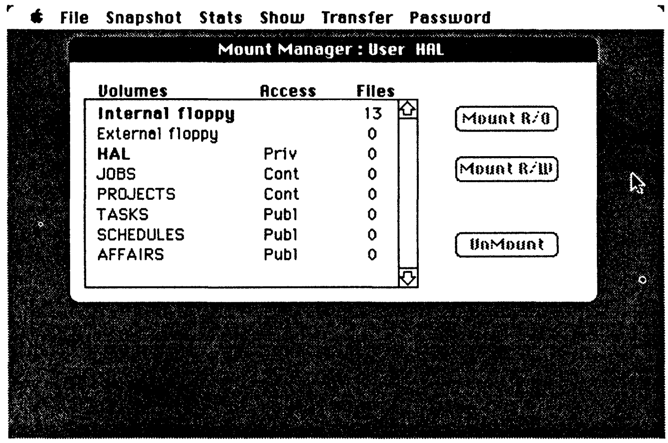


Volumes	Access	Files
Internal floppy		12
External floppy		0
HAL	Priv	0
JOBS	Cont	0
PROJECTS	Cont	0
TASKS	Publ	0
SCHEDULES	Publ	0
AFFAIRS	Publ	0

If you change your mind and don't want to mount a volume that's highlighted, you can unmount it.

- **Move the pointer to the correct row and double-click to unmount a volume.**

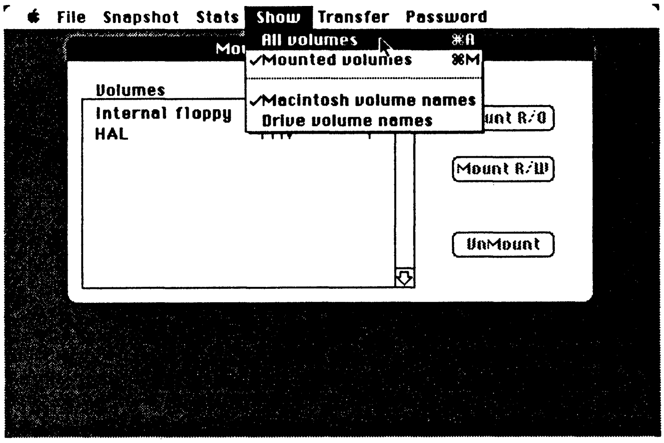
In this example, note that the volume name SCHEDULES is no longer highlighted, indicating that it is unmounted.



Volumes	Access	Files
Internal floppy		13
External floppy		0
HAL	Priv	0
JOBS	Cont	0
PROJECTS	Cont	0
TASKS	Publ	0
SCHEDULES	Publ	0
AFFAIRS	Publ	0

You can unmount any volume that is mounted except the volume containing the Mount Manager program. If you attempt to unmount the volume that the program is in, the screen will display an alert box. Just click OK to continue.

Scroll through the list of volumes before you quit the Mount Manager to make sure that you've mounted all the volumes you want. If the list is quite long, select Mounted volumes from the Show menu to list just those that are mounted. Select the All volumes option to redisplay the complete volume list.



- **Select Quit from the File menu.**

The screen clears, and the desktop reappears with the icons for the volumes you chose to mount. It may take more than a minute for all the icons to appear if you mount the maximum number of disks and volumes.

Now that you have a basic understanding of how to mount volumes, you can take a break and begin using volumes, or you can continue reading about mounting volumes you don't own.

Others' Volumes

Mounting volumes that you don't own is similar to mounting your own, but you'll probably have to know the volume password. Remember that all the volumes you can use are listed in the Volumes column, so all volumes owned by others that are available are listed.

Follow the steps below to mount a volume that is password-protected. The Mount Manager should already be open on the desktop.

- **Move the pointer to the desired volume.**

The volume will probably be denoted *Publ* or *Cont.* Remember that public and controlled volumes are accessible to all users, but if they have passwords, only people who know the passwords can mount them.

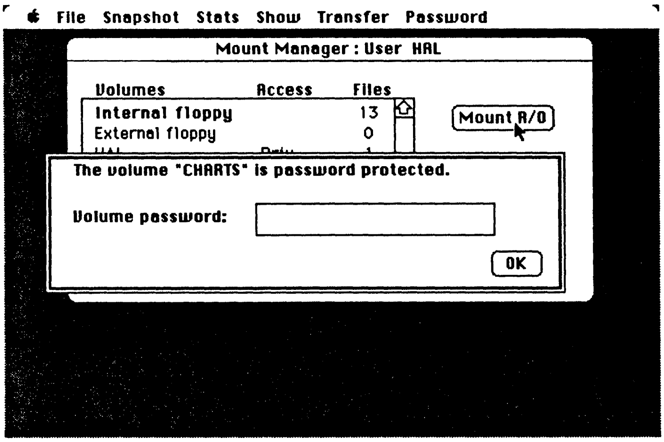
- **Click somewhere along the row for the volume.**

The row is highlighted, along with the Mount R/O button if it is a public volume, and both Mount R/O and Mount R/W if it is a controlled volume.

You can also double-click on the row to mount the volume. If you aren't the owner, double-clicking will mount public volumes R/O and attempt to mount controlled volumes R/W.

- **Move the pointer to Mount R/O and click.**

The dialog box requesting the volume password appears (if the volume is password-protected).



Mount Manager : User HAL

Volumes	Access	Files
Internal floppy		13
External floppy		0

The volume "CHARTS" is password protected.

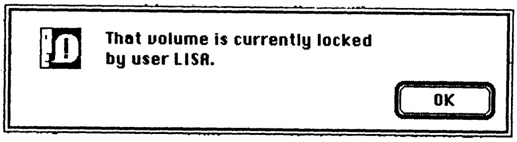
Volume password:

■ **Type the volume password and click OK.**

If you selected R/O access, the volume is now mounted. The volume name becomes highlighted, and *R/O* appears in the Access column.

If you selected R/W access and no one else has the volume mounted with R/W access, the volume is now mounted, and the volume name is highlighted.

If you selected R/W access for a controlled volume but another user already has R/W access, a message appears to indicate which user it is.



That volume is currently locked by user LISA.

Check with that user to see when you can have R/W access to the volume. Note that you can still have R/O access now.

■ **Select Quit from the File menu.**

If another user ever gets a warning message saying that you have a controlled volume still locked, but you know it's currently not mounted, several possibilites exist:

- You may have ejected the volume icon with the Finder instead of using the Mount Manager.
- You may have turned off the Macintosh without running LogOff.
- A power failure may have shut down the network.

In any case, the volume would still be locked. To unlock a controlled volume, simply mount it again (the user who last locked the volume can always remount it) and then unmount it. Your unmounting it will unlock it so that the next user can have R/W access.

The Network Manager program also has an option to unlock locked volumes.

Now that you are familiar with mounting volumes, you can continue learning about volumes, or you can take a break from reading at this point. You should begin copying files from all of your disks to volumes as soon as possible. Once the files are in volumes, you can start using the network instead of the disks. Remember to run LogOff before turning off your Macintosh.

Creating Volumes

All network users can create their own volumes on the OmniDrive, as long as enough free space is available. The Volume Manager program can add, delete, change, and clear volumes. This section shows how to add both standard and custom volumes.

The standard volume sizes are small, medium, large, and of course, extra large. The block sizes are 800, 1600, 3200, and 6400, respectively. Since two blocks equal one K, an 800-block volume is equivalent to a 400K disk.

Corvus suggests using small or medium size volumes to hold a number of small files, and large or extra-large volumes to hold a few large files (e.g., database files). Remember that the number of files a volume can hold depends upon the volume size, the directory size, and the number of characters in each file name.

A custom volume allows you to choose the size of the volume and the directory in it. Although custom volumes allow a great deal of flexibility, they are subject to some restrictions. The subsection "Adding Custom Volumes" explains the details.

Adding volumes requires writing to the organization tables on the drive. Since two users cannot write to the tables at the same time, a warning message appears if someone else is already using the tables.

If you notice the warning message while using the Volume Manager, click OK and try again. The tables are rarely locked for too long, so try again after a minute or two.

Adding Standard Volumes

Adding standard volumes is the quickest and easiest way to create volumes. You need to specify only volume name, volume password, access type, and volume size (small, medium, large, or extra large). The four volume types (private, public, controlled, and uncontrolled) determine which network users can read from or write to a volume.

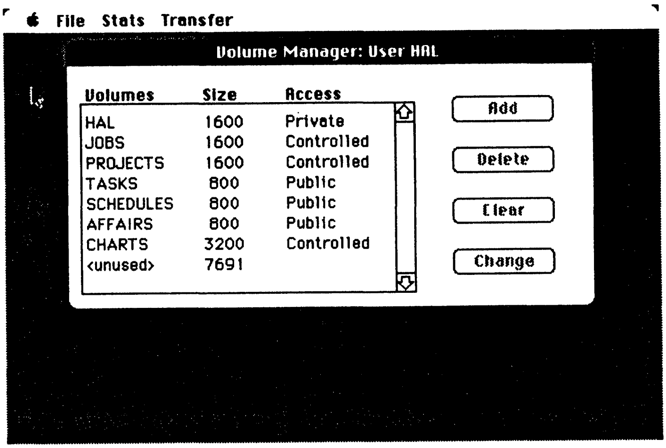
The section "Volume Types" near the beginning of this chapter gives detailed descriptions of access and volume types. Refer to that section whenever you need a refresher in R/W-R/O access and the four volume types.

Remember also that the password provides another measure of control over who uses a volume. For example, if you create a controlled volume that you want only certain users to share, give it a password and tell only those users what it is.

You will most likely create private volumes initially, but you may want to create public or controlled volumes later. The steps below show how to add a private volume.

- **Open the startup disk window.**

- **Double-click on the Volume Manager icon.**

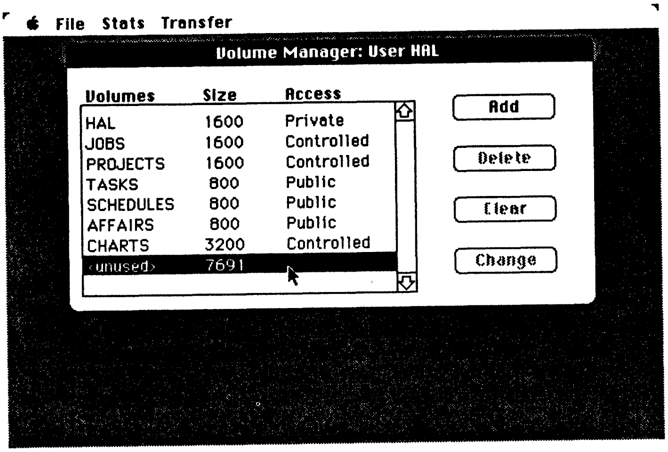


Volumes	Size	Access
HAL	1600	Private
JOBS	1600	Controlled
PROJECTS	1600	Controlled
TASKS	800	Public
SCHEDULES	800	Public
AFFAIRS	800	Public
CHARTS	3200	Controlled
<unused>	7691	

The Volume Manager window includes the Volumes column, which lists the volumes on the drive; the Size column, which shows the volume size in blocks; and the Access column, which indicates the volume type (private, public, controlled, or uncontrolled).

The Add option button is dimmed until you select the free area. To add a volume, use the scroll box as needed to move to the free area, which is indicated by <unused> in the Volumes column. The free area must be at least 800 contiguous blocks to add a standard volume.

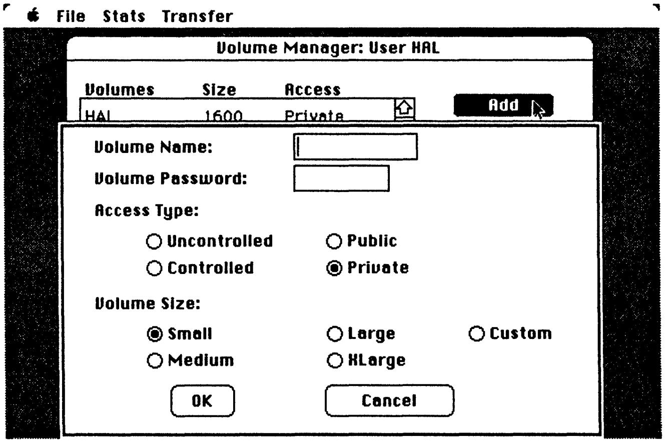
■ **Click somewhere on the <unused> row.**



Volumes	Size	Access
HAL	1600	Private
JOBS	1600	Controlled
PROJECTS	1600	Controlled
TASKS	800	Public
SCHEDULES	800	Public
AFFAIRS	800	Public
CHARTS	3200	Controlled
‹unused›	7691	

Note that the Add button is now highlighted.

■ **Click on the Add button.**



Volumes	Size	Access
HAL	1600	Private

Volume Name:

Volume Password:

Access Type:

○ Uncontrolled ○ Public
○ Controlled ● Private

Volume Size:

● Small ○ Large ○ Custom
○ Medium ○ XLarge

Note that the insertion point is in the box for volume name.

- **Type a name for your volume.**

Up to 10 characters are permitted, but only letters, numbers, and periods are allowed. You do not have to press Return or Tab to enter the name.

When creating private volumes, do not give them passwords (the Mount Manager would ignore them anyway), but you may want to give passwords to other volume types that you create. Just create and type a password, using up to 8 characters.

- **Choose the access type.**

Private is automatically selected. To make other volume types, just click on the button next to the desired type.

- **Choose the volume size.**

Small is automatically selected. If you want a volume larger than 800 blocks (400K), move the pointer to the desired size and click. Note that if there's not enough room for a particular volume size, that size will be dimmed.

- **Now that the attributes are set, click OK.**

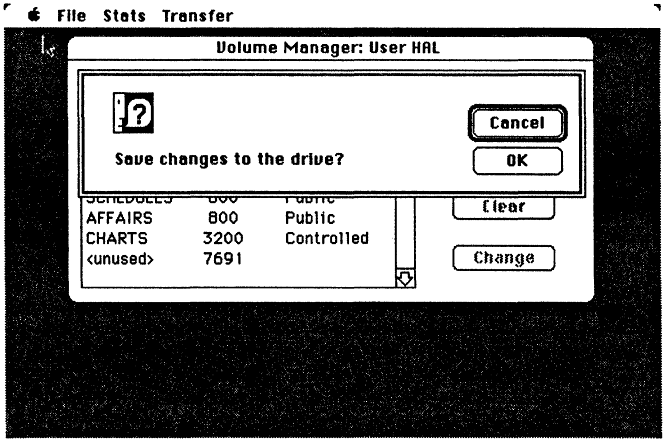
If you made a mistake on any of the entries, redo them or click Cancel to return to the Volume Manager window. After you click OK, the screen displays the Volume Manager window again, but now the volume just added appears on the list.

The volume is not saved to the table on the drive until you exit the Volume Manager or transfer to the Mount Manager. Add other volumes following the procedure outlined above. When finished, exit the Volume Manager and save the changes.

To exit to the desktop, select Quit from the File menu.

If you are going to use the Mount Manager immediately, you can transfer to it quickly with the Transfer option. From the Volume Manager menu bar, simply choose Mount Manager from the Transfer menu. Both programs must be in the same volume for the Transfer option to work.

If you added volumes, exiting either way causes the following dialog box to appear:



Save changes to the drive?

AFFAIRS	800	Public
CHARTS	3200	Controlled
<unused>	7691	

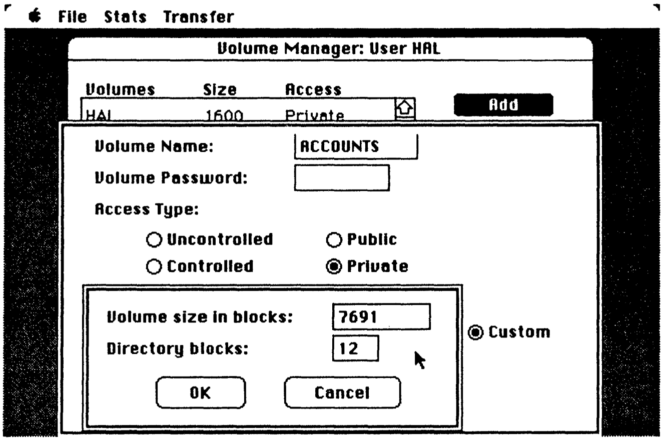
- **Click OK to save changes.**

If you change your mind, click Cancel, and all the changes you specified will be ignored. For example, if you added four volumes and now want to change one, you can't at this point--you must either cancel and lose all four entries, or click OK to add all four, then make the desired changes.

If you're just starting out with Constellation 3 and have created volumes before reading about mounting them, you should return to the section "Mounting Volumes" at the beginning of this chapter.

Adding Custom Volumes

Custom volumes are created similarly to standard volumes, except that you select Custom instead of one of the volume sizes. When you click OK after selecting the attributes, another dialog box appears:



Volumes	Size	Access
HAL	1600	Private

Volume Name: ACCOUNTS

Volume Password:

Access Type:

○ Uncontrolled ○ Public

○ Controlled ● Private

Volume size in blocks: 7691

Directory blocks: 12

● Custom

When you choose Custom, you can specify the size of the volume, from 400 to 32000 blocks. You can also specify the number of directory blocks, from 8 to 20 blocks.

A Macintosh volume is divided into two parts: the directory and the file space. The directory holds the names and other information about files, and the file space holds the actual data. A volume is full when either the directory or the file space is full.

On a disk, the file space usually fills up before the directory space, but that's not always the case in a volume. It's possible for a volume's directory space to fill up before its file space. Since there's no indication that the directory is full, a confusing situation arises: a volume which clearly has free space cannot store more files.

The standard Macintosh directory is 12 blocks long, regardless of the volume size. However, the 512K Macintosh can safely support up to 20 directory blocks.

Larger directories mean better use can be made of large volumes (anything over 2400 blocks) if you will be storing many small files in them. You can safely use volumes with directories over 12 blocks for lots of small files, but be aware that the standard Finder will operate more slowly. If you want to use the large volume for large files, such as spreadsheets or data bases, just specify 12 blocks.

Customizing Your Startup Disk

Now that you're comfortable with both the Mount Manager and the Volume Manager, it's time to fine tune your startup disk with a special Mount Manager document called *Automount*. This section shows how to create the Automount file, which automatically mounts a selected set of volumes each time you log onto the network. The section also shows how to change your user password and copy files to volumes.

Automatic Volume Mounting

Each time you log on, the LogOn program runs to set up the Macintosh for network operation. LogOn can also automatically mount volumes by checking a Mount Manager document that you create in advance. The document must be named *Automount*.

You create Mount Manager documents with the Take option from the Snapshot menu in the Mount Manager after mounting the desired volumes. The Take option takes a *snapshot* of the volumes you have mounted and places it in a document. Mount Manager documents are called snapshots for this reason.

You can name the snapshot *Automount* for automatic mounting at log-on time, or you can give it another name and place it in a volume for use after logging on.

Snapshots can be opened just like documents created with other applications--double-click on them and the application is opened, too. When you open a snapshot though, it mounts the volumes automatically and closes the program.

You can have as many snapshots as you need, each one for mounting the volumes for a particular activity. The snapshots can be saved to any volume. Note that only the one named Automount and saved on the startup disk will be opened when you log on.

The Snapshot option can make opening the Mount Manager a rare event, since you only need to use it once and take a snapshot. Each time you want the volumes mounted, double-click on the snapshot.

For example, if you have one set of volumes you mount for using MacWrite(tm) and a different set for using an accounting application, you could use snapshots for mounting them. Simply give the snapshots recognizable names so that you can pick the appropriate one to open. Just double-click to switch from one set to another.

If you remove a volume that is included in a snapshot, you should re-create the snapshot to avoid getting a warning when you open it.

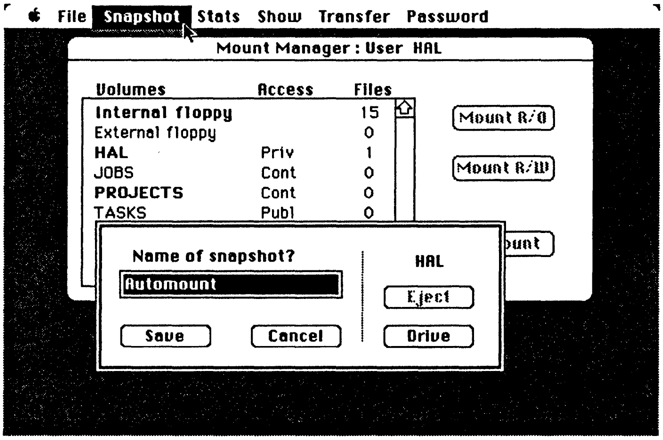
If you want the Automount snapshot to eject the startup disk when you log on, just open the Mount Manager from the system volume. The system volume will then become part of the snapshot, ensuring that it will be mounted every time you log on.

If your network has a public system volume, open the program from it. If it doesn't, you'll have to make your own system volume before creating the Automount snapshot.

The section "What's Next?" at the end of this chapter shows how to create your own system volume. After you have a system volume, open the Mount Manager from it and follow the steps below to create *Automount* and any other snapshots you want.

- **Mount and unmount volumes to arrive at the combination you want.**

- **Select Take from the Snapshot menu.**



The name of the volume from which you opened the Mount Manager appears in the upper right corner of the box. If you want the snapshot saved to another volume or the startup disk, click Drive until the desired name appears.

- **Type a name for the snapshot and click Save.**

  Since Automount is the suggested name, simply click Save to create the snapshot for the startup disk. Be sure the startup disk name is the selected drive.

  To create a snapshot for use after logging on, type a different name and save the snapshot to a volume. If you change your mind, click Cancel to return to the Mount Manager window.

  Note that the document is saved without your having to exit the Mount Manager. Since volumes are actually mounted only after exiting, you can take all your snapshots at once, without actually mounting any of the volumes until you're finished.

- **After all snapshots are taken, quit the Mount Manager.**

  After you've taken snapshots, you can use the Look option in Snapshot to list all the documents in a volume. Click Drive to switch volumes.

  You can also open the snapshot from within the Mount Manager by selecting it from the Look list and clicking Open. You'll see the indicated volumes highlighted.

  This option can be used to check a snapshot if you've forgotten what volumes it mounts. For now, exit the program by selecting Quit from the File menu.

- **Double-click on a snapshot to check it.**

The screen displays a message indicating that the snapshot is being processed. If any of the volumes specified are password-protected, you will have to enter the password; otherwise, the process is completed without your having to do a thing.

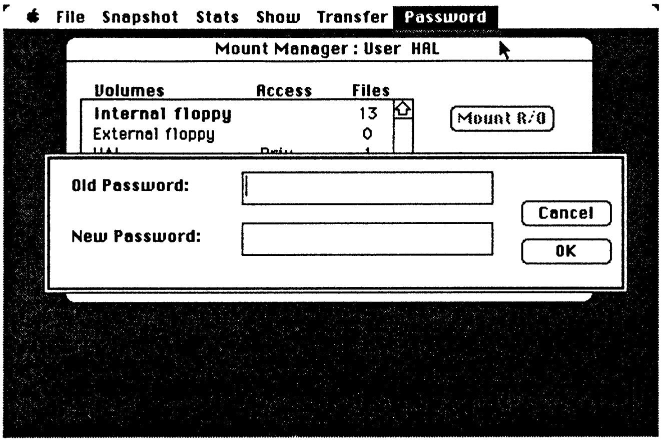
To check the Automount snapshot, turn off the Macintosh and restart it with the now-modified startup disk. The specified volumes should be mounted.

You will have to enter the passwords for password-protected volumes you don't own that are part of *Automount*. If the snapshot includes a controlled volume mounted with R/W access and another user already has it locked, the warning message appears as usual. Just click OK to continue. Of course, the volume will be mounted R/O because it is locked.

Changing Your Password

You may want to change your user password if you suspect other users know it, or if you feel it's just time for a change. The Mount Manager should be open on the desktop.

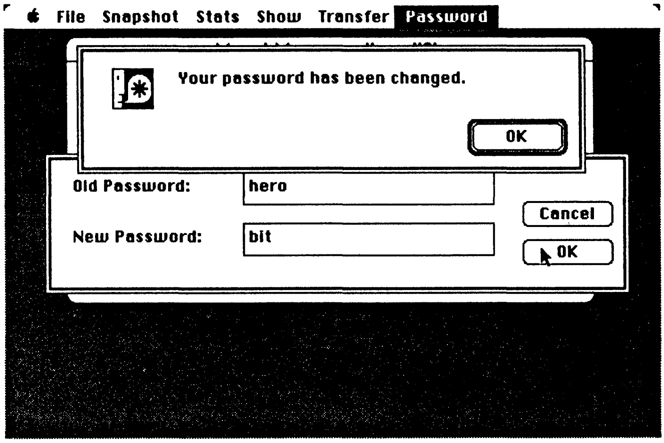
- **Select Change user password from the Password menu.**



Volumes	Access	Files
Internal floppy		13
External floppy		0

You must enter both the old password and the new one. Click Cancel to return to the Mount Manager window if you decide not to change your password.

- **Type the old password and press Tab.**
- **Type the new password and click OK.**



Your password has been changed.

Old Password: hero

New Password: bit

- **Click OK to verify that the password has been changed.**

What's Next?

Now that you know how to use both the Mount Manager and the Volume Manager, you're ready to start really using the network. Your first job is to copy the documents and applications from your collection of disks to your volumes; from now on you'll use the network instead of the disks. You should have all the skills you need to use the network with ease.

If your network manager has not created a system volume for network users to share, you'll have to create your own and copy the contents of the network startup disk, as well as other application programs, to it.

Follow the steps below to copy the files from a disk to a volume. If creating your own system volume, be sure to use only the System Folder from the network startup disk in it. If you must have another System Folder on the OmniDrive, make sure to copy it and the application that needs it to some other volume. The section "Volumes vs. Disks" in this chapter explains the System Folder in detail. The volume that will be receiving the files should be mounted, and the disk window should be open.

- **Choose Select All from the Edit menu.**

All of the icons in the window should become highlighted.

- **Move the pointer to one of the icons and drag it to the volume icon.**

Notice that all of the icons will follow the one you are dragging. Click OK when asked to replace any existing files.

The volume now should have all the same files as the disk. The system volume, either public or private, should be mounted at all times. It should be mounted because you'll open the Corvus applications from it, not the startup disk.

Remember to run LogOff each time you're done using your Macintosh on the network. Go to Chapter 3, "Using Network Resources," when you have to maintain your volumes, share information with other users, or back up your volumes to floppy disks.

Chapter 3:

Using Network Resources

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Introduction

This chapter gives step-by-step instructions for using network resources more fully. You've probably already seen how the network provides you with greatly increased information storage, but it can also simplify other computing tasks.

The network allows a group of users to have their own volumes on a shared OmniDrive disk system. The network also allows members of the work-group to share their work. The Change option in the Volume Manager lets you change the password on a public or a controlled volume so others can mount it.

One reason for sharing a volume might be if you are doing the writing and a co-worker is doing the graphs for a document. When you're ready to start, pick a controlled volume that you have created that has room for the document, and give it a password. Tell your co-worker the password so that she can begin her graphs.

Although you can both work on the document as it progresses, you don't have to worry about both writing at the same time, since only one of you can have R/W access at any given time. The section "Sharing Volumes" explains the procedure.

After you have information in your volumes, you should back it up on a regular basis. If you accidentally damage or delete a volume, you would surely like to restore the data to the OmniDrive. If you perform regular backups, these rare occurrences are no trouble. However, losing data that hasn't been backed up can be frustrating. To avoid that possibility, use the Backup program on a regular basis.

Sharing Volumes

This section shows how to use the volume password to allow other users to share your volumes.

Remember that a controlled volume gives the first user who mounts it R/W access and all others R/O access, while public volumes restrict all users except the owner to R/O access.

1. Open the Volume Manager icon.

None of the volumes will be highlighted until you select one. Remember, you can only change volumes you own.

If you need to find out who owns a volume, see the next section, "Checking Stats." The Stats option shows the owner as well as other attributes for the selected volume.

2. Move the pointer to the desired volume and click.

If you select a volume you don't own, none of the options are highlighted. If the volume is yours, the Delete, Clear, and Change buttons are highlighted.

3. Move the pointer to Change and click.

The insertion point starts out in the password box, but you can change just the access type by moving the pointer.

To give a volume a password, pick a word of no more than 8 characters (either letters, numbers, or periods) and type it in. Do not press Return.

To change the access to another type, click on the desired type.

Note that you cannot change controlled volumes to private or public when they're mounted R/W by another user, and you must make sure no other user has an uncontrolled volume mounted R/W when you change it.

4. Choose the changes you want to make.

If you want one or more other users to be able to read and write in your volume, make sure the access type is controlled. If you want others to just read information in your volume, make sure it's public.

If you want only select users to mount your volume, make sure it has a password that only those people know.

When all values are correct, click OK. Click Cancel if you don't want to make the changes.

5. Exit the Volume Manager.

Choose Quit from the File menu. If you made changes, a dialog box appears, asking if you want to save changes.

If the changes are correct, click OK. If you change your mind, click Cancel instead.

Checking Stats

Stats, or statistics, are available for both the whole OmniDrive and individual volumes. The stats show basically the same information depending on whether you're checking from the Mount Manager or the Volume Manager program.

You might use the Volume info option to find out who owns a public volume to which you want access. The stats also give advanced users information about the actual volume structure.

The menu title Stats for Mount Manager provides two menu choices: Volume info and Drive info. Drive info tells you: the drive name, drive size, number of volumes you can mount, total number of files they hold, and percentage of the drive the volumes occupy.

Volume info tells you: the volume name, file block size, number of file blocks, number of directory blocks, volume owner, access type, and the percentage of directory space and file space consumed. Volume info remains dimmed until a volume is selected.

The Stats title for Volume Manager provides the same choices, but it shows the number of volumes on the drive and the number you own with the Drive info option.

After checking stats, just click to return to the window in either Volume Manager or Mount Manager.

Maintaining Volumes

After you have created, mounted, and used volumes for a while, you might find that some of them will need modification or maintenance. The Volume Manager provides three options for modifying and maintaining volumes: changing, clearing, and deleting.

The Change option allows you to change the volume password and type. For example, you might add a volume password if you want to share a volume with others, and you might subsequently change the password if you want to deny access. The section "Sharing Volumes," which precedes this section, explains changing passwords so that others can share the volumes.

The Clear option destroys all files in a volume by erasing the volume's directory. Clearing removes all files like Erase Disk, but it is designed to work on volumes.

You must not use the Finder's Erase Disk command on any volumes, because the volume structure will be damaged. Use the Clear option instead.

The Delete option removes the volume, and all files in it, from the OmniDrive. You can only delete volumes you own. You might use the Delete option if you make a mistake when creating volumes, or if you really no longer want a volume you have been using.

When volumes are changed, cleared, or deleted, changes are not made on the drive until the program is exited. When you exit, you'll be asked whether or not to save the changes just made. Select Quit from the File menu to exit the program.

Clearing a Volume

When a volume is cleared, all files are deleted, but the volume structure remains intact.

Save any wanted files to another volume before using the Clear option.

The volume is automatically unmounted after it's cleared, so you'll have to use the Mount Manager to mount it again.

You can quickly switch to the Mount Manager to remount the volume by selecting Mount Manager from the Transfer menu (if both programs are in the same volume).

1. Select the volume to clear.

Select the volume you want to clear by clicking on it.

The row and the Clear, Delete, and Change buttons should become highlighted.

2. Clear the volume.

Click Clear. The screen displays a dialog box asking if you want to clear the volume.

If you've forgotten to save files you want, click Cancel to go back and save them.

To clear the volume, click OK.

Remember to save changes to the drive by clicking OK when exiting.

Deleting a Volume

To remove a volume from the drive, use the Delete option. Note that when a volume is deleted, all data in that volume is lost, too. Be sure to save any wanted files before deleting a volume.

1. Select the volume you want removed.

Click on the volume you want to delete.

The row and the Clear, Delete, and Change buttons should become highlighted.

2. Delete the volume.

Click Delete. The screen displays a dialog box asking if you want to delete the volume.

Click OK to delete it. An <unused> heading appears in place of the deleted volume.

Click Cancel if you decide not to delete it at this time.

Be sure to save changes when you quit the Volume Manager.

Backing Up Volumes

To protect yourself from losing data in the event you accidentally erase something you want, back up your volumes to floppy disks on a regular basis. Use the Backup program to transfer all the data from a volume to floppy disks. The same program restores the data back to a volume if you need it.

When a volume is backed up, the entire volume is copied (even unused space). A backup requires at least two disks, so be sure to have plenty of disks available. The program will indicate exactly how many are needed.

The destination volume for restoring must be the same size or larger than the volume that was copied. Also, restoring data overwrites any existing data in the volume, so make sure you aren't destroying anything you want.

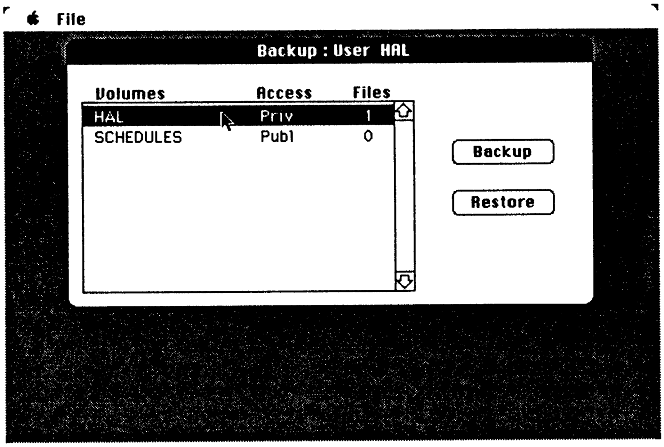
Only those volumes you own will appear in the list when you open the Backup window. You can back up any volume that has R/O or R/W access, but you can only restore to R/W volumes.

You might back up R/O volumes if you want to transfer the information to another volume, for example. A backup does not have to be restored to the same volume that was backed up--the volume must be at least the same size or larger.

Back Up Data

To back up data, open the Backup program from a volume. The screen should display all the volumes you can mount and the number of files in each volume. Mounted volumes are highlighted.

- **Select the volume to back up and click.**



Volumes	Access	Files
HAL	Priv	1
SCHEDULES	Publ	0

- **Move the pointer to Backup and click.**

  The screen displays the selected volume's name, file content, block size, and the number of disks required to perform the backup.

Back up the volume on either the internal or an external floppy drive. Select the appropriate drive. As the backup progresses, the screen indicates when to insert disks. The progress of the backup is depicted by a disk icon filling up.

Restore Data

To restore a volume, open the Backup program, select the volume to which the copy will be sent, and click Restore. Insert disks as needed. Remember that the restoring information overwrites (destroys) any information in the destination volume.

If the copy cannot be sent to the volume that was backed up, create another volume of the same size to receive it. Although the new volume will have a different drive volume name, it will have the Macintosh name of the backed-up volume after restoring. To avoid confusion, rename the new volume after mounting it with the Mount Manager.

Use the Drive volume names option in the Show menu to identify which of the two volumes you created to hold the copy (since they both have the same Macintosh names). Mount only the restored volume and give it another Macintosh name by backspacing over the old one and typing another.

If you don't know the contents of a backup disk, you can identify the name of the volume backed up and other information by simply opening the Backup program and inserting the disk. The screen will display the desired information.

Appendixes

Appendix A: Error Messages

This appendix contains a comprehensive list of error messages generated by the LogOn, Mount Manager, Volume Manager, and Backup programs. All error messages are listed; each entry gives the message, followed by what caused it, and a recommended course of action if necessary.

The messages are organized by program in ascending order, from warnings to serious errors. Check through the entries for the program you're using to find the error message you received and the recommended action.

LogOn

Password incorrect!

Cause -- You entered the wrong password, either by mistyping it or by not knowing it.

Action -- Try again.

There's no user (name) on this network.

Cause -- When LogOn runs, it reads your user name from the startup disk and checks it against the user list. If this message appears, one of three things has happened: your name has been erased from the table, your name has been damaged on the startup disk, or you tried to log onto another network.

Action -- Check with your network manager to find out what happened.

This is not a Macintosh network drive. Do you want to run SysGen?

Cause -- You should never see this message, since it only occurs when someone is setting up an OmniDrive for use. The ordinary network user should not have access to SysGen.

LogOn must be run from a network startup disk. Do you want to create one?

Cause -- LogOn failed to find a user name in the *Const3file* on the startup disk.

Action -- LogOn will allow you to specify your name, and, if it exists on the network, LogOn will enter it in the Const3file on your startup disk.

Error opening the AUTOMOUNT file.

Cause -- The Automount file (snapshot) is damaged.

Action -- Re-create the file with the Mount Manager.

Error reading the AUTOMOUNT file.

Cause -- The Automount file is damaged.

Action -- Re-create the file with the Mount Manager.

The network semaphore is locked. Please try again or cancel.

Cause -- Someone else on the network is using a network utility, or the semaphore has been left locked inadvertently. Under Under normal conditions, the semaphore is rarely locked for more than a second or two.

Action -- Click Try again a few times. If the semaphore is still locked, notify the network manager.

The volume (name) can't be found on the drive.

Cause -- When the Automount snapshot is taken, the drive volume names of the volumes, not the Macintosh names, are stored. This message usually means that the volume has been deleted or that you logged on to the wrong network.

The volume (name) is currently locked by user (name). It will be mounted for read only.

Cause -- Another user on the network has R/W access to a controlled volume that LogOn tried to mount with the Automount feature. You will have R/O access to the volume instead.

There is no "Const3file" on your disk. You must have one in order to log on.

Cause -- You don't have the Const3file on your startup disk.

Action -- Get a copy of the file with your user name in it from the network manager. Copying another user's won't work, since her user name will be encoded in the file.

Sorry...there isn't a "SysGen" program on your disk.

Cause -- LogOn detected you were using a single-user drive (as opposed to a network drive) and offered you the chance to convert it. However, there was no SysGen program on your disk.

Action -- Get a copy of Sysgen if you really want to convert the drive.

Mount Manager

To mount a floppy, just insert it.

Cause -- You double-clicked on "Internal floppy" or "External floppy".

Action -- Insert the disk to mount it.

Sorry...a maximum of six OmniDrive volumes may be mounted.

Cause -- You tried to mount more than six volumes, but only six can be mounted.

You can't unmount the volume from which the Mount Manager was run!

Cause -- You tried to unmount that volume.

I can't mount that floppy; it's either unformatted or damaged.

Cause -- You have inserted an unformatted, improperly formatted, or damaged disk.

Action -- Remove the disk.

Error (something) the script file (file name).

Cause -- An error reading, writing, opening or closing the script file (script files are written by the Snapshot option) occurred. Due to the number of possible errors that can occur, this is a catch-all message. It displays the Macintosh error number associated with the error in most cases.

Action -- The most common cause of this error is attempting to write a script file to a write-protected disk or R/O volume. Insert an unlocked disk or select another volume with R/W access.

The script file (name) exists and is locked.

Cause -- You attempted to take a snapshot with the same name as an existing, locked script file.

Action -- Unlock the old script file (using Get Info in the Finder).

The volume is write protected.

Cause -- You tried to take a snapshot and write it to a R/O volume.

Action -- Choose a different volume or unprotect the original volume.

The old password is incorrect.

Cause -- You must give the old password in order to change it to a new password, and you gave the wrong one. This is a security feature to prevent unauthorized persons from changing your user password.

Action -- Give the correct password next time.

The network semaphore is locked. Please try again or cancel.

Cause -- Someone else on the network is using a network utility or the semaphore has been left locked inadvertently. Under normal conditions, the semaphore is rarely locked for more than a second or so.

Action -- Click Try again once or twice. If the semaphore is still locked, notify the network manager.

You don't currently have access to a volume (name).

Cause -- The Mount Manager only displays the volumes you have access to when it's opened, so normally you can't select an inaccessible volume. However, a snapshot may try to mount a volume that has been deleted since the snapshot was taken.

Action -- Check the volume list with the Volume manager.

The volume (name) can't be found on the drive.

Cause -- When a snapshot is taken, the drive volume names of the volumes, not the Macintosh names, are stored for the Mount Manager to use. This message generally means that a volume has been deleted or that you logged on to the wrong network.

Action -- Check the volume list with the Volume Manager.

That volume is currently locked by user (name).

Cause -- When a snapshot is taken, the read/write status of a volume is recorded. For example, if you have a volume mounted R/W, the Mount Manager would try to mount it R/W each time the snapshot is opened. However, in the case of a controlled volume, another user may have it mounted R/W at the time the snapshot is read, in which case you can't.

Action -- Ask the other user to unlock it, or manually mount the volume read-only.

An error occurred unlocking the semaphore. Please notify your Network Manager.

Cause -- Something catastrophic, perhaps a failure in your interface cable or the OmniDrive itself. You should never see this message.

Action -- Notify the network manager at once.

Volume Manager

This volume name is already in use.

Cause -- You tried to add a volume with a name that already exists.

Action -- Choose another volume name.

You can't delete the volume from which the Volume Manager was run!

Cause -- You tried to delete that volume.

Action -- Open the Volume Manager from another volume.

Sorry...that's the wrong password!

Cause -- You entered the wrong password trying to delete a password-protected volume.

Action -- Try entering the password again.

That volume is currently locked by user (name).

Cause -- You tried to use the Change option to change a controlled volume to private or public, and another user currently has the volume mounted R/W.

Action -- Ask the user to unmount the volume so that you can change it.

Are you sure no one else has this volume mounted R/W?

Cause -- You tried to use the Change option to change an uncontrolled volume to another type.

Action -- Check with the other users to ensure that no else has it mounted R/W.

The file 'Const3file' is not available.

Cause -- You don't have the Const3file in the same volume as the Volume Manager.

Action -- Copy the file to the volume (the file is in the System Folder on your startup disk).

Sorry...you have run out of memory!

Cause -- Not enough memory to store all the additions and changes you have been making with the Volume Manager. You should never see this message.

Action -- You'll have to start again, but this time you should save changes to the drive as you go.

Constellation 3 not installed on drive.

Cause -- You are trying to run the Volume Manager on a single-user drive or a drive that hasn't been through system generation.

Action -- Check with the network manager.

The Constellation 3 tables are being used by someone else.

Cause -- Someone else on the network is using a network utility, or the semaphore has been left locked inadvertently. Under normal conditions, the semaphore is rarely locked for more than a second or two.

Action -- Click Try again once or twice. If the semaphore is still locked, notify the network manager.

The OmniDriver is not loaded.

Cause -- You did not log on with the correct startup disk.

Action -- Get a good startup disk from the network manager.

Backup

You can't restore the volume from which the Backup program was run!

Cause -- You tried to restore data to the volume from which the Backup application was opened.

Action -- Open it from another volume.

The sizes of (destination volume) and (backup volume) don't match. Restore anyway?

Cause -- You are trying to restore one volume to another that is larger.

Action -- You may continue with the restoration, but you will lose some space on the restored volume, since the directory that will be written is that of the smaller volume.

Sorry...(name) is too large to restore to (name).

Cause -- You tried to restore one volume to another that is smaller.

Action -- Choose another volume that is large enough to receive the information.

The network semaphore is locked. Please try again or cancel.

Cause -- Someone else on the network is using a network utility, or the semaphore has been left locked inadvertently. Under normal conditions, the semaphore is rarely locked for more than a second or two. This can only happen when you try to back up or restore a controlled volume.

Action -- Click Try again once or twice. If the semaphore is still locked, notify the network manager.

That volume is currently locked by user (name).

Cause -- Another user must have a controlled volume locked that you want to back up or restore.

Action -- Ask the user to unlock it.

That's not a Macintosh disk!

Cause -- You inserted an unformatted or damaged disk as part of the backup or the restoration.

Action -- Insert the correct disk.

That's not a backup disk!

Cause -- You inserted an incorrect disk as part of the backup.

Action -- Insert the correct disk.

That disk isn't part of this backup!

Cause -- You inserted an incorrect disk as part of the restoration.

Action -- Insert the disk you really meant to use.

That disk has already been read as part of this restoration.

Cause -- You inserted the same disk twice.

Action -- Insert the disk you really meant to use.

Error reading the BACKUPINFO file!

Cause -- The Backupinfo file contains such thing as the date of backup and number of disks used. For some reason, it couldn't be read.

Action -- Repeat the procedure, and if it fails again, the backup copy you have is no good.

I can't back up to a write-protected disk!

Cause -- You inserted a disk with the tab locked.

Action -- Unlock the disk.

Error opening the BACKUPINFO file!

Cause -- The Backupinfo file probably doesn't exist on the disk.

Action -- Repeat the procedure, and if it fails again, the backup copy you have is no good.

Error opening BACKUP file!

Cause -- The Backup file is the main file for the backup. If it is lost or damaged, the backup is worthless.

Action -- Repeat the procedure, and if it fails again, the backup copy you have is no good.

Error writing to BACKUP file!

Cause -- Something is probably wrong with the disk.

Action -- Replace the bad disk and repeat the procedure.

An error occurred during the format process. The disk is probably unusable.

Cause -- The disk is probably defective.

Action -- Try another one.

An error occurred while clearing the disk. The disk is probably unusable.

Cause -- The disk is probably defective.

Action -- Try another one.

An error occurred while reading the Backup file.

Cause -- There are a number of possibilities.

Action -- Repeat the procedure, and if it fails again, you have a bad backup.

Semaphore error; volume is not unlocked. Please notify your system manager.

Cause -- Something horrible. You should never see this message.

Action -- Notify the network manager at once.

Glossary

access

Access is the ability to mount a volume for reading and writing, or just reading, information. Accordingly, access is either read-only or read-write. Access is controlled at the volume level by having volume owners, passwords, and access types. Various combinations of these three attributes allow you to control who can use information in your volumes.

access type

The access type, in conjunction with owner and password, controls volume access. There are four access types: public, private, controlled, and uncontrolled. A volume's access type determines whether only the volume owner can use the volume, or whether a number of other network users can share it.

allocation block

Allocation blocks make up the file space in a volume. The size of each block varies with volume size and is indicated by the allocation block size for that volume. The number of allocation blocks in a volume should be less than 400. See *allocation block size* for more information. File block is another term for allocation block.

allocation block size

The allocation block size determines the number of kilobytes in each allocation block in a volume. It is always an integer value (1K, 2K, 4K, etc.), and it also determines the minimum amount of file space that a file will occupy. For example, if you save a 2K file to a volume that has an allocation block size of 10K, the file will be allocated 10K automatically.

attributes

Attributes describe a single volume or the whole OmniDrive. An OmniDrive has several attributes, such as its drive name, size, and number of volumes. A volume's attributes include its name, size, location, owner, password, access type, allocation block size, number of directory blocks, and number of allocation blocks.

Automount

Automount is a special snapshot that will automatically mount volumes when you log on to the network. The Automount file must be on your startup disk to mount volumes automatically. See *snapshot* for more information.

back up

Backing up is the process of copying data from your volumes to floppy disks. You should always keep backup copies of your data in case it's accidentally damaged or erased from the OmniDrive.

Backup

Backup is the program you'll use to back up your data. It copies all the data in a volume to the required number of disks. It's also used to restore the data if the copy is needed.

block

A block, unless otherwise noted, contains 512 bytes (one half K) of data. The location and size of volumes on the OmniDrive are measured in blocks.

byte

A byte is the basic unit of storage for the Macintosh. One byte represents one character, such as a character or a digit. There are 1024 bytes in one K (kilobyte).

clear

Clear refers to removing all the files from a volume, but leaving the volume structure intact. It's comparable to dragging all the icons from a disk to the Trash, then emptying the trash.

Const3file

The Const3file in the System Folder on your startup disk contains your user name and number. The LogOn program reads the name from the file and compares it with the list of names in the organization tables. The Const3file also contains templates that the Volume Manager uses to create volumes.

controlled

Controlled is one of the volume access types. A controlled volume permits R/W access for the first user who knows the volume's password and requests R/W access. Once the first user has the volume mounted with R/W access, all others, even the volume's owner, can have only R/O access.

custom

Custom is a volume type that allows you to specify the size of the volume and the number of directory blocks in it. Custom volumes can only be added if at least 400 blocks of free space are available.

delete

Delete refers to deleting a volume from the OmniDrive. When you delete a volume, all the information in it is lost as well. A volume should only be deleted if you're sure it contains nothing you want.

directory block

A directory block contains 512 bytes. The directory size is determined by the number of directory blocks in the volume.

directory size

The directory size is determined by the number of directory blocks in the volume. Standard volumes, like floppy disks, have 12 directory blocks. However, with the Custom option, you you can create volumes with more directory blocks so that they can have more directory entries. Directory space is another term for directory size.

drive volume name

The drive volume name is the name that appears in the organization tables on the drive. It matches the name on the icon (the Macintosh name) when first created, but the drive volume name never changes. When you rename a volume icon, the drive volume name stays the same. The Show menu in the Mount Manager lets you switch from Macintosh volume names to drive volume names.

file block

File block is another term for allocation block. See the definition of *allocation block* for details.

file space

File space refers to the amount of space in a volume that is available for storing information. The rest of the usable space in the volume is reserved for the directory.

free space

Free space is the unused portion of the OmniDrive that is unused. If there are at least 400 blocks available, you can add another volume to utilize the space.

Imagewriter file

The Imagewriter file controls printing for most applications. MacPaint$^{(tm)}$ is one notable exception, in that it has built-in printing control functions. The Imagewriter file is part of the System Folder, but it can be in volumes other than the system volume.

initialize

Initializing prepares the OmniDrive for use. It also places the organization tables on the drive as well.

Link Check

Link Check is a utility that writes a pattern to an unused portion of the OmniDrive and reads it back again. The process determines whether the interface cable is linking the OmniDrive and the Macintosh correctly. If errors do occur, they are reported on screen.

log on

Log on means to start using your Macintosh on the network. Your network startup disk contains your user name, which is checked against a list of users on the OmniDrive. If there's a match, you're allowed to use the network. The LogOn program does the checking.

LogOff

LogOff is a utility that automatically updates all volume directories, unmounts all volumes, ejects all floppies, and restarts the Macintosh. It should be used every time you're finished using your volumes to ensure that the directories are correctly maintained.

LogOn

LogOn is the program that permits you to get on the network and begin working. It runs automatically every time you start the Macintosh with the network startup disk.

location

Location is the starting block address of a volume on the OmniDrive. It describes where the volume begins, and the size, or length, indicates how much space it occupies.

Macintosh volume name

The Macintosh volume name identifies the volume icon and can be changed at any time. See the definition of *drive volume name* for further information.

megabyte

A megabyte is one million bytes. The various OmniDrive models are identified by how many megabytes of information they can store.

Mount Manager

The Mount Manager is the application that governs which volumes you can use at any given time. The program shows you the volumes available on the drive and allows you to select those that you want to use.

mounting

Mounting is the process volumes go through before you can use them. The outward sign that a volume is mounted is the appearance of its icon on the desktop. The volume owner, along with the access type, determines who can mount a volume.

network manager

Network manager is a convenient way to summarize the duties required for running the network; it does not necessarily mean one person. These duties include setting up the network hardware and software so that the workgroup can begin using the network and solving any problems that might arise in daily use of the network.

network startup disk

The network startup disk is a disk provided by the network manager that you must use every time you log onto the network. The network manager should provide you with your own startup disk, since each user must have a personalized disk.

OmniDriver

The OmniDriver is the software Corvus adds to the System file in the System Folder so that the Macintosh and the OmniDrive can communicate.

organization tables

Organization tables are created on the OmniDrive by the SysGen program. These tables define your volumes by keeping track of their names and locations on the drive. You see the information in these tables when you use the Corvus applications.

owner

Owner is the first level of volume access control. Only the owner can have R/W access to his private or public volumes, and only the owner can change the password or access type. A volume's owner is determined either by the network manager or by the user who creates the volume; you automatically own all the volumes you create.

password

There are two types of passwords that network users encounter. One is the user password, which must be entered each time you log onto the network. The other is the volume password, which other users must enter to mount your volumes. Both user and volume passwords are optional. However, if you don't have a user password, anyone can log on with your startup disk, and if you don't have volume passwords, anyone can mount your public, controlled, and uncontrolled volumes.

private

Private is one of the volume access types. It is the most restrictive type, since only the owner can mount a private volume. The owner can choose to have R/W or R/O access, but no one else can have any access to it.

public

Public is another one of the volume access types. A public volume allows all network users who know the password to mount it, but only the owner can have R/W access. All others can have only R/O access.

R/O

R/O is an abbreviation for read-only, which is defined below.

R/W

R/W is an abbreviation for read-write, which is defined below.

read-only

Read-only means that information can only be read from a volume, not written to it. Mounting a volume read-only ensures that none of its information can be changed.

read-write

Read-write means that information can be written to and read from a volume at all times. You'll most likely mount volumes read-write all the time, since all changes or additions to documents require read-write capability.

restore

Restore means to use backup copies of volumes to replace damaged or erased originals. The backup copies are saved on disks using the Backup program. The Backup program is also used to restore the information if needed.

saving changes

Saving changes refers to actually changing the organization tables on the OmniDrive. When you add, change, clear, or delete volumes on the drive, the changes aren't actually made until you click OK to save changes when quitting the Volume Manager.

semaphore

A semaphore is a flag that application programs can set, or raise, to control R/W access to shared files. A multiuser application sets the semaphore when one user writes to a file. The semaphore is cleared, or lowered, when he's done. When the semaphore is cleared, another user can write, it's set again, and so on. Semaphores are a feature of Constellation 3, but they must be implemented by the application software.

snapshot

A snapshot is a Mount Manager document that automatically mounts a specified set of volumes when you double-click on it. The snapshot is created with the Take option on the Snapshot menu in the Mount Manager. See the definition of *Automount.*

standard

Standard describes the four volume sizes (small, medium, large, and extra-large) that the Volume Manager can create automatically. You need only specify which of the four you want a volume to be. The volume size and number of directory blocks are predefined.

uncontrolled

Uncontrolled is one of the four volume types. Uncontrolled volumes allow all users who know the password to have R/W access to the volume. Only applications that use semaphores should be used in uncontrolled volumes.

user name

Your user name identifies you as a network user. The name is written on your startup disk, thereby personalizing it. The user name appears in the organization tables on the drive.

Volume Manager

The Volume Manager is the application that divides the OmniDrive into volumes. It allows you to add, delete, and change volumes.

volume

A volume is one storage unit on the OmniDrive. The OmniDrive can be divided into lots of small volumes, or just several extra-large ones. You create volumes in sizes to suit your storage needs. Volumes are similar to disks in that both appear on the desktop as icons, but volumes let you decide how much information can be stored.

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